

The Big Snow

December 2003/January 2004

Some of the Lessons Learned

Deicers: The use of both liquid and solid deicers on the west side of the state proved to be beneficial. WSDOT experienced shortages of some chemical deicers and vendors not being able to keep up with the demand. WSDOT will evaluate expanding storage capabilities at various maintenance sheds across the state.

Steel Plow Bits vs. Rubber Plow Bits: On the west side of the state, rubber bits are used. The use of steel bits would have aided in the ability clear the compact snow and ice sooner, but would have significantly damaged the raised pavement markers.

Equipment and personnel: The shifting of equipment and personnel across areas proved to be helpful. Some newer maintenance personnel have not had the opportunity to plow significant amounts of snow due to its infrequency on the west side of the state. We need to consider training opportunities in areas with more snow so they are better prepared in the future.

Road Restrictions: We need to review the process for implementing roadway restrictions (i.e. chains required) with WSP and others for routes such as I-5.

Use of salt: In locations where crews were using salt brine and rock salt as part of the Salt Pilot Project, the salt proved to be very effective.

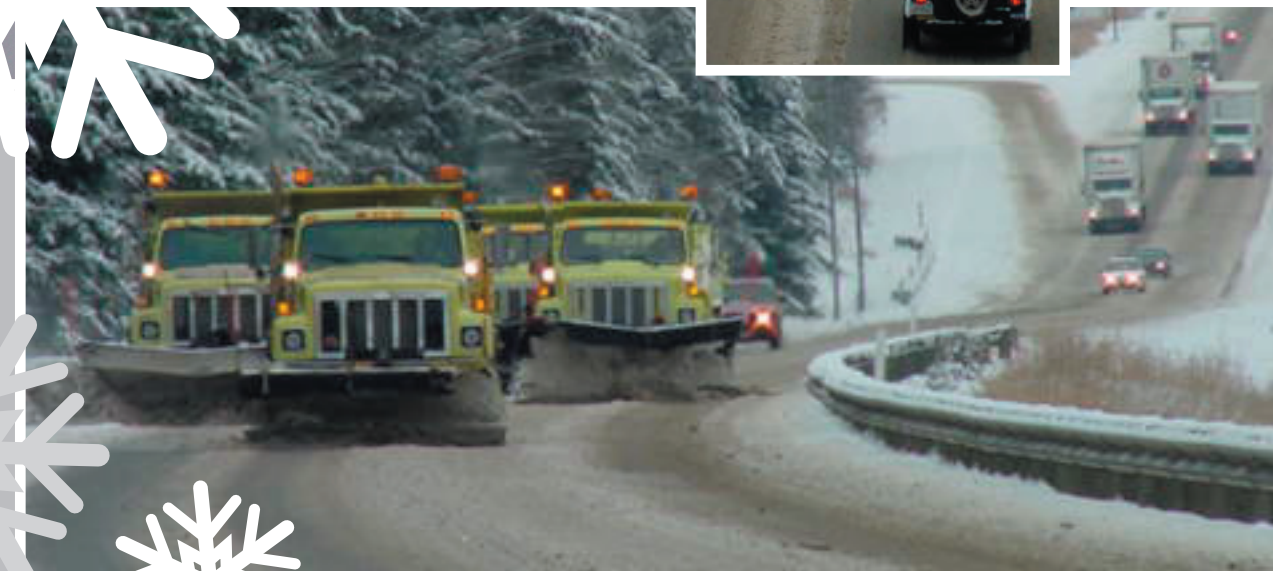
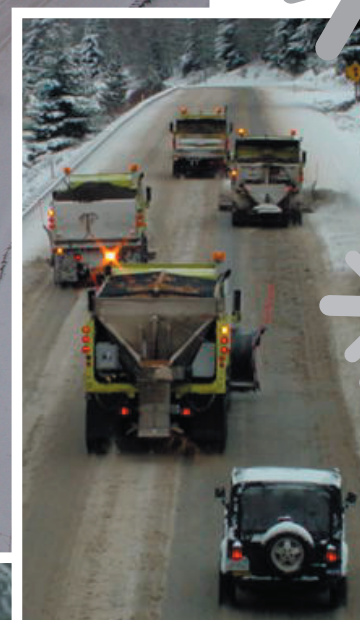
Costs













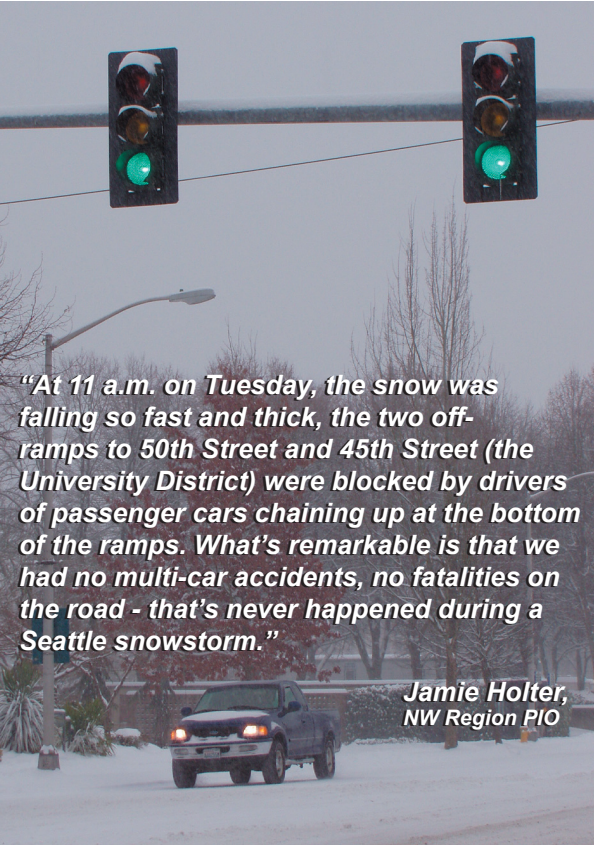












Over the course of the event, WSDOT expended approximately \$5.6 million dollars for snow and ice control. This compares to a planned expenditure of approximately \$1.5 million dollars for that same time period.

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Date	Weather		Roadway Conditions	WSDOT Action Taken		Major Accident Incidences	Snoqualmie Pass
	Western WA	Eastern WA		Roadway	Internal and External Communications		
Tues 12/30/03	 1.2”(Sea) Hi: 34 Low: 24	 Hi: 25 Low: 3	Some snow accumulations on highways in NW and SW regions. Roads were maintained in good condition. No closures or significant impact to traffic movement.	NW and SW region maintenance crews prepared and deployed all available resources to address road conditions.	<p>Throughout the storms, WSDOT staff kept the public informed of travel conditions through a variety of tools including: the Web site; the traveler information phone lines 1-800-695-ROAD and 511; highway advisory radios; and variable messages signs. Public information officers (PIO) sent news releases and talked to reporters prior to the first snowstorm to inform the public of WSDOT’s readiness for snowy conditions and to offer winter driving tips.</p> <p>WSDOT communication staff worked not only with their own teams, but also with other WSDOT offices, outside organizations, Emergency Operations Center (EOC) staff and dozens of reporters to insure everyone knew and could convey information about conditions across the state, not just in a particular region. WSDOT’s Region and Headquarters staff coordinated around the clock during the entire storm event and provided continuous updates on response operations covering details regarding road and weather conditions, safety advisories and alerts, type of equipment, material and work resources that were expended etc. Each region had communications staff available 24 hours a day to provide alerts regarding traffic conditions when weather and/or incidents affected commutes. WSDOT communicators crafted a variety of news releases with information ranging from highway conditions to snowplow awareness.</p> <p>The winter snowstorms coincided with the ongoing National “Orange Alert” status declared by the Department of Homeland Security office. WSDOT staff successfully coordinated with the activation of Statewide EOC operations to respond to the winter storm and continued to provide security-monitoring operations for Highway and Capital facilities in conjunction with Washington State Patrol and other responding agencies.</p>	The department continues to collect data. However, to date (Jan. 19), no snowstorm-related fatalities have been reported.	0” snow
Wed 12/31/03	 1.4”(Sea) Hi: 35 Low: 22	 1”(Yak) Hi: 27 Low: 17	Some snow and ice on roadway but crews are still maintaining highways in good condition.	Full deployment of resources as needed.			7” snow
Thu 1/01/04	 4.8”(Van) Hi: 37 Low: 31	 5.8”(Yak) Hi: 31 Low: 19	Difficult road conditions on both sides of the mountains from snowfall.	Intensive snow and ice control effort in both eastern and western Washington. Some closures in eastern Washington due to road conditions.			3” snow
Fri 1/02/04	 (trace) Hi: 39 Low: 32	 (trace) Hi: 29 Low: 12	Larger amounts of snow and freezing rain in SW Washington made for difficult road conditions with several areas of compact snow and ice still on the roadway.	NW region maintenance crews prepared and able to maintain roads in passable condition. SW region maintenance crews are still working on clean up of snow and ice from previous snowfall/freezing rain. Snow and ice control continues throughout eastern Washington.			4 “ snow
Sat 1/03/04	 ICE Hi: 40 Low: 23	 2.9”(Yak) Hi: 27 Low: 7	Compact snow and ice conditions persisted in NW and SW regions. Compact snow and ice formed in Olympic region. The cold and dropping temperatures and traffic caused the snow to immediately begin compacting and bonding to the pavement.	NW and SW region crews continue working on a 24-hour basis to control snow and ice and provide traction via sanding. Olympic region not on contingency schedule at the time snowfall commenced and had to call out employees from home to respond. Heavy traffic and multiple accidents hampered the response time by WSDOT maintenance crews. Snow and ice control continues throughout eastern Washington.			6” snow
Sun 1/04/04	 ICE Hi: 36 Low: 20	 Hi: 15 Low: -24	The very cold temperatures contribute to the persistence of compact snow and ice on roads throughout the area. Traffic action combined with very cold temperatures compressed the compact snow and ice to almost an entirely ice surface.	Maintenance crews throughout western Washington continue to maintain roads as well as possible on a 24-hour basis. Rubber-bit plow blades are no longer effective at removing snow or ice from the roadway and operations consists primarily of patrolling highways and applying sand for traction.			9” snow
Mon 1/05/04	 Hi: 26 Low: 20	 Hi: 11 Low: -14	Difficult road conditions persist due to cold temperatures	Maintenance crews throughout western Washington continue to work 24-hour basis and deploy all resources available to maintain driving conditions as well as possible.			0” snow
Tue 1/06/04	 4.9”(Van) Hi: 31 Low: 18	 3.5”(Y) Hi: 12 Low: -8	Heavy snowfall throughout western Washington leads to compact snow and ice conditions at all locations. Eastern Washington gets little snow but cold temps keep ice on roads in many locations	All resources deployed to remove snow and ice from western WA highways and manage traffic. Eastern Washington crews continue sanding/deicing roads.		Compact snow and ice on most of I-5 Chains required – SR 16 @ TNB I-5 and I-90 Express Lanes closed ODOT closed I-84	0.5” snow – Highway closed one hour for avalanche control.
Wed 1/07/04	 Hi: 39 Low:27	 4”(Spok) Hi: 18 Low: 10	Snow and freezing rain cease in western Washington. Heavy snowfall in Cascades and eastern Washington.	All resources deployed to continue removal of snow and ice from western Washington highways and manage traffic. Western Washington crews focus on cleanup. Intensive snow and ice control throughout mountains and eastern Washington.		Compact snow and ice on most of I-5 I-5 Express lanes closed	13” snow – Highway closed 13 hours for snow removal.
Thu 1/08/04	 Hi: 47 Low: 28	 Hi: 28 Low: 13	Freezing rain in Columbia River Gorge leads to icy roads	Western Washington crews complete cleanup of remaining snow and ice. Exception is SR 14 where plowing and sanding continues – eventually had to close highway. Continue snow and ice control throughout eastern Washington.			13” snow accumulation
Fri 1/09/04	 Hi: 55 Low: 33	 ICE Hi: 37 Low: 26	Continued freezing rain in SW region – icy roads	SR 14 reopened. Manage traffic backups from freezing rain/ice on I-5 and I-205 bridges over the Columbia River		SR 14, I-5, I-205 in Vancouver impacted by freezing rain.	1.5”snow accumulation
Sat 1/10/04	 Hi: 50 Low: 32	 Hi: 37 Low: 21		WSDOT Incident Response (IR) teams assisted stranded motorists, responded to collisions, opened clogged drainages, and cleared trees from travel lanes throughout the duration of the storms.		I-82 in Toppenish closed due to ice	1.5” snow accumulation